Claims

What is claimed is:

1. A system for determining a quality of service, comprising:

a plurality of passive probes attached to a plurality of network connections in a packet communication network; and

a collector correlator in communication with the plurality of probes, the collector correlator determining a dropped packets measurement.

2. The system of claim 1, wherein the collector correlator measures a delay time.

3. The system of claim 1, wherein the collector correlator measures a jitter.

4. The system of claim 1, wherein each of the plurality of passive probes has a sampler.

5. The system of claim 1, wherein each of the plurality of passive probes has a time stamp subsystem.

6. The system of claim 1, wherein each of the plurality of passive probes has a probe packetizer.

7. The system of claim 1, wherein the collector correlator transmits a control information packet.

8. The system of claim 1, wherein one of the plurality of probes transmits a report packet.

9. The system of claim 1, wherein the collector correlator is capable of calculating a quality of service without monitoring every network connection.

10. A method of determining a quality of service, comprises the steps of:

a) defining a flow to monitor at a collector correlator;

b) transmitting a control information to a probe;

c) selecting a traffic packet at the probe based on the control information packet; and

d) transmitting a report from the probe to the collector correlator.

11. The method of claim 10, wherein step (a) further includes the step of:

al) randomly selecting the flow to monitor.

12. The method of claim 10, wherein step (a) further includes the step of:

al) receiving a user input defining the flow to monitor.

13. The method of claim 10, wherein step (a) further includes the step of:

al) defining a pair of packet addresses.

14. The method of claim 10, wherein step (a) further includes the step of:

al) selecting a port number.

15. The method of claim 10, wherein step (a) further includes the step of:

al) selecting a type of protocol.

16. The method of claim 10, wherein step (a) further includes the step of:

a1) selecting which of the plurality of probes are to monitor the flow.

17. The method of claim 10, wherein step (d) further includes the step of:

d1) determining a time the traffic packet was detected.

18. The method of claim 10, wherein step (b) further includes the step of:

b1) transmitting a report queue control information.

19. The method of claim 18, wherein step (b1) further includes the step of:

i) defining a time of day.

20. The method of claim 18, wherein step (b1) further includes the step of:

ii) defining a queue length.

21. The method of claim 18, wherein step (b1) further includes the step of:

iii) defining a discard rule.

22. The method of claim 10, wherein step (d) further includes the step of;

d1) calculating a quality of service with incomplete data.

23. A system for determining a quality of service, comprising:

at least two passive probes attached to at least two network connections in a communication network; and
a collector correlator in communication with the at least two passive probes, the collector correlator determining a flow to be monitored.

24. The system of claim 23, wherein the collector correlator transmits a control information to the at least two passive probes.

25. The system of claim 23, wherein the at least two passive probes transmit a report to the collector correlator.

26. The system of claim 23, wherein the collector correlator measures a jitter.

27. The system of claim 23, wherein the at least two passive probes have a common clock.

28. The system of claim 24, wherein the control information includes a report queue control information.

29. The system of claim 23, wherein the collector correlator is capable of computing a router's quality of service without monitoring any of the network connections connected to the router.